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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,837	09/07/2006	Howard Goodman	07812.0060-00	3011

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EXAMINER

SANDERS, KRIELLION ANTONETTE

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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01/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,837	Applicant(s) GOODMAN ET AL.	
	Examiner Kriellion A. Sanders	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/17/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Rice, US Patent No. 4,798,766 in view of applicant's own admission at page 9, second complete paragraph of applicant's specification.

3. The reference is relied upon for reasons of record. Rice discloses a layered silicate that is surface modified with an organic material by reacting said layered lattice silicate in particulate form with a reactant system comprising gaseous NH₃ at temperatures below about 1000.degree. C. and contacting the aminated silicate in particulate form with an organic compound selected from the group of monomers, co-monomers, prepolymers and compounds condensable with the amine group, such as a nylon precursor, in the presence of gaseous hydrogen. The surface modified silicates are useful as fillers in a filled polymer system comprising a matrix polymer and a filler. The silicate may be any of mica, talc or kaolin. The organic compound may be selected from the class consisting of amino acids, dicarboxylic acids, monofunctional acids and difunctional acids, 6-amino caproic acid, E-caprolactam, adipic acid and 11-amino undecanoic acid. Patentee discloses a process for directly aminating the surface of a layered lattice silicate, such as a clay mineral surface, comprising reacting the said clay mineral in substantially dry particulate form with a reactant system capable of forming bound

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NH.sub.2 groups at said surface; and contacting the aminated silicate in substantially dry particulate form with an organic monomer, co-monomers or a prepolymer, or an organic compound condensable with the amine group. In Example 1 the clay has a particle diameter of 2 micrometers or less and is used as at filler in an amount of 40% of the polymeric composition. This example encompasses the limitations of applicant's claims 8 and 14-18.

See the abstract column 2, lines 18-31, Example 1 and all claims.

Example I of Rice '766 discloses kaolin clay having a P.S.D. (particle size distribution) such that 60% by weight of the particles thereof were less than 2 microns. The particles are subjected to hydrogen treatment in accordance with the present invention. The sample is treated with a combination of nitrogen and hydrogen.

Rice does not disclose that that the particulate clay material must have a particle shape factor greater than about 10. However, based upon applicant's specification it is clear that,

"A range of particulate clay materials are available, which have the required particle size and shape factor, or can easily be processed in ways well known to the skilled worker to arrive at the required particle size and shape factor."

It therefore would have been obvious to the ordinary practitioner of this art at the time of applicant's invention, to derive the optimal particle and shape factor that was most advantageous for purposes of the invention.

4. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rice '766 in view of applicant's own admission at page 9, second complete paragraph of applicant's specification as applied above and further in view of Rice '982..

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The references are relied upon for reasons of record. Table II of Rice '982 discloses conventional additives that may be employed with the surface treated clays of the invention.

These examples meet the limitations of applicant's claims 19-22.

5. Claims 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rice, US Patent No. 4,798,766 in view of applicant's own admission at page 9, second complete paragraph of applicant's specification, as applied above and further in view of Anker et al., US Patent No. RE31992

6. The references are relied upon for reasons of record.

7. Anker et al. documents various adjuvants and ATH as a conventional flame retardant for filled polymer composition and is used interchangeably with clay, talc and calcium carbonate. See claim 8. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate any of the conventional additives or flame retardants in the compositions of Rice'766.

Response to Arguments

8. Applicant's arguments filed 11/16/2009 have been fully considered but they are not persuasive.

9. Applicant argues that, "...nothing in the references themselves, or in the knowledge of one of ordinary skill in the art would have rendered it obvious to have prepared a surface-modified particulate clay material according to the pending claims (modified with at least one organic compound comprising an organic portion and a basic portion) wherein the particulate clay material has a particle shape factor greater than about 10. As such, the Office has failed to

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establish a prima facie case of obviousness under 35 U.S.C. § 103(a) based on Rice '766, Rice '982, and Anker, whether taken alone or in any combination.”

This argument has not been found to be persuasive because it is clear from applicant’s own disclosure that the variations of the particle shape factor of a particulate clay material such as taught by Rice would have been an obvious variation to one of ordinary skill in the art at the time of applicant’s invention. Based upon applicant’s specification it is clear that,

“A range of particulate clay materials are available, which have the required particle size and shape factor, or can easily be processed in ways well known to the skilled worker to arrive at the required particle size and shape factor.”

It therefore would have been obvious to the ordinary practitioner of this art at the time of applicant’s invention, to derive the optimal particle and shape factor that was most advantageous for purposes of the invention.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122.

The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders
Primary Examiner
Art Unit 1796

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